

REMARKS

Applicant respectfully requests reconsideration and allowance of claims 1-2, 4-17, and 19-41, which are pending and stand rejected in the above-identified application. Applicant has amended claim 1 herein. No new matter is added by the amendments. Support for the amendments may be found in at least FIGS. 1-14; claim 1; the abstract; and paragraphs [0013-016] and [0098-0100] of the specification as originally filed. In view of the following discussion, Applicant submits that all pending claims are in condition for allowance.

Claim Rejection under 35 U.S.C. §112, second paragraph:

At page 2 of the January 13, 2009 Office Action, the Examiner rejected claim 1 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner alleged that “sensitivity” and “active surface area” are not defined in either the claim or the specification. Applicant has amended claim 1 to recite such language, and, therefore, discusses the clarity and definiteness of such language herein. Claim 1 now recites “the at least one detector is used with a sensitivity such that the at least one detector has a pitch that is larger than an active surface area thereof”, and, therefore, includes a definition for “sensitivity” in accordance with the description thereof in the specification as originally filed. (See at least [0013-0016] and [0098-0100] of the specification, *e.g.*, detectors may have sensitivity such that the sensors have a relatively large pitch in comparison to an active surface area). The subject portions of the specification provide the meaning of “active surface area”. Specifically, the specification describes that at least one detector may be situated in the focal line of the system in order to extract at least one image spot from the microimage behind the microlens, and “[d]etectors are thereby used with such high sensitivity that these have a large pitch with a small active surface area.” ([0013] of the specification, emphasis added.) A portion of the surface area of the detector may not extract the image, and, therefore, would be non-active. Thus, one skilled in the art would understand that the active surface area of the detector is the portion of the surface area that actively extracts the at least one image spots from the microimage. Therefore, Applicant submits that amended claim 1 clearly recites the subject language, and is now definite.

Claim Rejections under 35 U.S.C. §102(b):

At pages 2-4 of the Office Action, the Examiner has rejected claims 1, 2, 4, 9, 17, and 26 under 35 U.S.C. §102(b) as being anticipated by Kato (U.S. Pat. No. 5,682,203). In view of the amendments herein, Applicant respectfully submits that the Examiner's claim rejection has been overcome.

Amended independent claim 1 recites, in part, "the at least one detector is used with a sensitivity such that the at least one detector has a pitch that is larger than an active surface area thereof".

By way of background, at least one embodiment of claim 1 covers a device having a detector where a pitch of the detector is larger than an active surface area of the detector. For example, a detector may have a pitch, p , that is larger than the active surface area of the detector (*e.g.*, as indicated by the size, a , of the scannable microimage of the detector as seen in FIG. 1 and discussed in at least [0109] of the specification). Thus, the detector has a sensitivity defined by the relationship of the pitch, p , being larger than the active surface area (*e.g.*, the size, a). (See FIGS. 1-14; the abstract; and paragraphs [0013-016] and [0098-0100] of the specification.)

Applicant submits that Kato does not disclose or suggest using at least one detector with a pitch that is larger than its active surface area as recited in claim 1 of the instant application. Kato merely discloses a relationship between a lateral or longitudinal interval of the micro lens 3 and the photo cells 2 (*i.e.*, the alleged detectors). Indeed, Kato does not disclose or suggest any active surface area of a photo cell 2 (as compared to a non-active surface area), and Kato does not disclose or suggest the relationship where a pitch is larger than an active surface area as claimed. Thus, Kato does not disclose or suggest each and every limitation of claim 1, and claim 1 is patentable. As claims 2, 4, 9, 17, and 26 depend from claim 1, and recite additional patentable features, the subject dependent claims are, therefore, likewise patentable. Accordingly, Applicant respectfully requests that the Examiner's §102 claim rejection be withdrawn.

Claim Rejections under 35 U.S.C. §103(a):

At pages 5-23 of the Office Action, the Examiner has rejected:

- (i) claim 5 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Beeson et al. (U.S. Pat. No. 5,521,725, hereinafter “Beeson”);
- (ii) claims 6, 7, and 20-23 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of AAPA (“An Artificial Compound Eye Using a Microlens Array and its application to scale-invariant processing” and “Optical sensor array in an artificial compound eye”);
- (iii) claims 8, 11-13, 19, and 27-30 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Miyatake et al. (U.S. Pat. Pub. No. 2006/0072029, hereinafter “Miyatake”);
- (iv) claim 10 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Meyers (U.S. Pat. No. 6,141,048);
- (v) claims 14 and 16 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Takayama (U.S. Pat. Pub. No. 2005/0041134);
- (vi) claim 16 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Miyatake in further view of Takayama;
- (vii) claim 24 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Miyatake in further view of Nagaoka et al. (U.S. Pat. Pub. No. 2004/0218283, hereinafter “Nagaoka”);
- (viii) claim 25 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Miyatake in further view of Campbell et al. (U.S. Pat. No. 7,196,728, hereinafter “Campbell”);

- (ix) claim 31 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Miyatake and further in view of Tangen et al. (U.S. Pat. No. 6,765,617, hereinafter “Tangen”);
- (x) claim 32 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Miyatake in further view of Sasano et al. (U.S. Pat. No. 5,466,926, hereinafter “Sasano”);
- (xi) claim 33 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Miyatake in further view of Crosby (U.S. Pat. Pub. No. 2004/0201890); and
- (xii) claims 34-41 under 35 U.S.C. §103(a) as being unpatentable over Kato in view of Mizuguchi et al. (U.S. Pat. No. 5,543,942, hereinafter “Mizuguchi”).

In view of the amendments herein, Applicant respectfully submits that the Examiner’s claim rejections have been overcome.

The reasons for patentability of claim 1 over Kato as discussed above apply with equal weight here. Beeson, AAPA, Miyatake, Meyers, Takayama, Nagaoka, Campbell, Tangen, Sasano, Crosby, and Mizuguchi, alone or in combination, do not disclose or suggest using at least one detector with a sensitivity such that the at least one detector has a pitch that is larger than an active surface area of the detector. Thus, Beeson, AAPA, Miyatake, Meyers, Takayama, Nagaoka, Campbell, Tangen, Sasano, Crosby, and Mizuguchi, alone or in combination, do not cure the aforementioned deficiencies of Kato, and the subject combinations do not result in the invention of amended claim 1 of the instant application. Therefore, claim 1 is patentable. The subject dependent claims depend from claim 1, recite additional patentable features, and are, therefore, likewise patentable. Accordingly, Applicant respectfully requests that the Examiner’s §103 claim rejections be withdrawn.

Further, Applicant respectfully disagrees with the Examiner’s Official Notices taken in the subject rejections. Specifically, Applicant submits that it is not well known to: (i) provide a plurality of similar pixels at a greater spacing in an optical channel in order to increase the light strength without loss of resolution, for the purpose of capturing images in lower light situations (Official

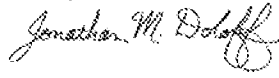
Notice at page 14 of the Office Action); (ii) to provide an image recognition system as claimed as an integral component of a clock, notebook, PDA or organizer, mobile telephone, spectacles, clothing items, for the purpose of using a compact camera which won't take up unnecessary space (Official Notice at page 22 of the Office Action); and (iii) provide an image recognition system as claimed for checking and implementing access or use authorization and to integrate in a chip card, credit card, medical technology, monitor tasks in the interior and exterior of vehicles, intelligent cockpits monitoring in the aircraft industry, etc. (Official Notice at page 22 of the Office Action.)

Conclusion:

In view of the foregoing, Applicant submits that the instant claims are in condition for allowance. Early and favorable action is earnestly solicited. The fee for the petition is included herewith. In the event there are any fees due and owing in connection with this matter, please charge same to our Deposit Account No. 11-0223.

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Respectfully submitted,

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